

PREHISTORIC-TIME-LAPSE PHOTO A natural stone bridge at Makoshika State Park near Glendive shows off hidden colors when lit by a photographer's flashlight and headlamp at night as he moves past the formation (he's standing in the photo's far upper right corner). The greens and other hues picked up by his camera lens during a three-minute exposure show what the area might have looked like millions of years ago when stegosaurs and other dinosaurs lived there.

DINO

Eastern Montana's **Makoshika State Park** shines as one of the nation's premier places for all things paleo. *By Peggy O'Neill | Photos by John Warner*

DESTINATION

I wouldn't have been surprised if a Sleestak slithered up behind me and tapped me on the shoulder. Hiking at Makoshika State Park near Glendive triggered not only flashbacks to those reptilian humanoids and other characters from my favorite childhood show—the 1970s *Land of the Lost*—but also the awe and curiosity of a child exploring a natural playground full of scientific discovery.

During a recent visit, I learned of possible reasons why T. rex had such small arms (to slash at prey held close or to grasp a partner while mating), why ankylosaurus is considered one of the dumbest dinosaurs (it had the smallest brain-to-body ratio), and which extinct mammal park ranger Brenlee Shipps would be if that were a possibility (a giant ground sloth). “Sloths are incredible creatures we should all aspire to be,” says Shipps while leading a group of 10 park visitors. “We could all stand to slow down, eat a leaf, and nap in a tree once in a while.”

Ignoring Shipps's advice, at one point I laughed and screamed while I slid down a wet, slippery clay trail, mud caking my socks and splattering my teeth. I cheered with about 200 other people at the opening credits of the 2009 animated movie, *Ice Age 3*, during a nighttime screening at an outdoor amphitheater. And I slept in a tent under a sturgeon moon—the first full moon of August, named for the time of year when sturgeon were once caught in abundance. My 16-year-old son says he has outgrown dinosaurs, but during my trip to Makoshika, I felt like I was the kid.

PREMIER PARK

The word Makoshika (*mah-KO-shi-kuh*) comes from the Lakota *Mako sica*, meaning “bad land” or “land of bad spirits.” No won-

der the moniker stuck. Vegetation here is sparse and in places nonexistent. Rainfall is rare. The caprocks, pedestals, natural bridges, and other eerie rock formations look like the surface of Mars.

But in fact, the only thing “bad” about these lands, situated near the North Dakota border, is that they are so far from most Montanans. It takes a day or more for residents of Helena, Missoula, Kalispell, or Great Falls to reach Makoshika, which at more than 11,000 acres is Montana's largest state park.



der the moniker stuck. Vegetation here is sparse and in places nonexistent. Rainfall is rare. The caprocks, pedestals, natural bridges, and other eerie rock formations look like the surface of Mars. But proximity is no problem for out-of-state visitors from North Dakota, Minnesota, and points beyond, who whiz past the park on their way to the Rocky Mountains. With a quick detour off Interstate 94, visitors can experience Makoshika's starkly beautiful scenery and moments of quiet and peace where the only sound comes from distant prairie winds over vast, gray, hardened sand ridges.

Makoshika is one of the state's top tourism destinations. In 2017, *USA Today* named Makoshika as Montana's No. 1 attraction. The park draws close to 100,000 visitors each year who come for the prehistoric otherworldliness of the terrain; to see the fossil remains of T. rex, triceratops, and the dimwitted ankylosaurus; and, if they are adults like me, to tap into their inner dinosaur-loving child.

The best way to learn about the region's legendary dinosaur heritage is during the park's weekly paleo tour, known as the “Paleo Experience.” The tour begins at the visitor center, continues to the paleo lab (where visitors can hold fossils), and ends with a hike to partially exposed hadrosaur vertebrae on the Diane Gabriel Trail, named in honor of the late Museum of the Rockies paleontologist who conducted dinosaur research at Makoshika.

During our tour, Shipps passes around a box and invites visitors to hold the contents. “What do you have in your hands?” she asks.

A choir of kids answer in unison, “Shells!”

“Right. But why do we have shells here?” Shipps asks. The kids are stumped. Makoshika is 1,500 miles away from the nearest ocean.

That wasn't always the case, Shipps explains. Sixty to 100 million years ago, Makoshika was part of the Western Interior Seaway, which existed from the mid- to late Cretaceous period into the early Paleogene period and divided North America into two large landmasses. Shipps says that the park is one of the few places on Earth to see the Cretaceous-Paleogene (K-Pg) boundary. (The K-Pg abbreviation is derived from *Kreide*—German for “chalk,” and the abbreviation for the Paleogene period.) The K-Pg boundary is a thin band of rock associated with the period's extinction event, which killed off the world's dinosaurs. “Some scientists believe it was caused by a giant meteor striking Earth and causing an ecological change, most likely a massive cooling, that led to their extinction,” Shipps explains.

In other words, at Makoshika you can see and even touch possible evidence of the moment dinosaurs disappeared.

Wolf Point visitor Max Ludwig, 11, peppers Shipps with questions, correctly



SCENIC CINEMA Top: With a natural backdrop as beautiful as a movie sunset, visitors watch *Ice Age 3* at the park's outdoor amphitheater. The park also holds ranger programs and Shakespeare in the Park plays at the amphitheater, which seats 200 people. Bottom: In the park's visitor center, a family meets some of the region's original inhabitants: a T. rex (foreground) donated by the Museum of the Rockies and a triceratops discovered at the park. Roughly 95 percent of the fossils displayed came from Makoshika.



pronouncing words like “pachycephalosaurus” that are far beyond a grade schooler’s typical vocabulary. “Max has wanted to be a paleontologist since he was in preschool when he couldn’t even pronounce ‘paleontologist,’” his mother explains. When the paleo tour stops at an enormous cast of a T. rex skull, the loquacious Max is speechless. Though not discovered in the park, the skull was found in Montana in one of Gabriel’s other digs.

In 1991, a 5.5-foot-long, 600-pound juvenile female triceratops skull was unearthed in the park and is now displayed in the visitor center. And in 1997, a thescelosaurus skeleton, considered the largest and most complete of its kind, was found on a Makoshika expedition led by Jack Horner. Horner is the recently retired paleontology curator at Bozeman’s Museum of the Rockies and technical advisor for all five *Jurassic Park* movies. Museum of the Rockies researchers recently uncovered yet another triceratops horn at Makoshika.

Because of its rich and extremely visible prehistoric heritage, Makoshika is one of the highlights of the Montana Dinosaur Trail, a series of 14 museums and parks across the state that feature exhibits of Montana’s treasure trove of dinosaur fossils.

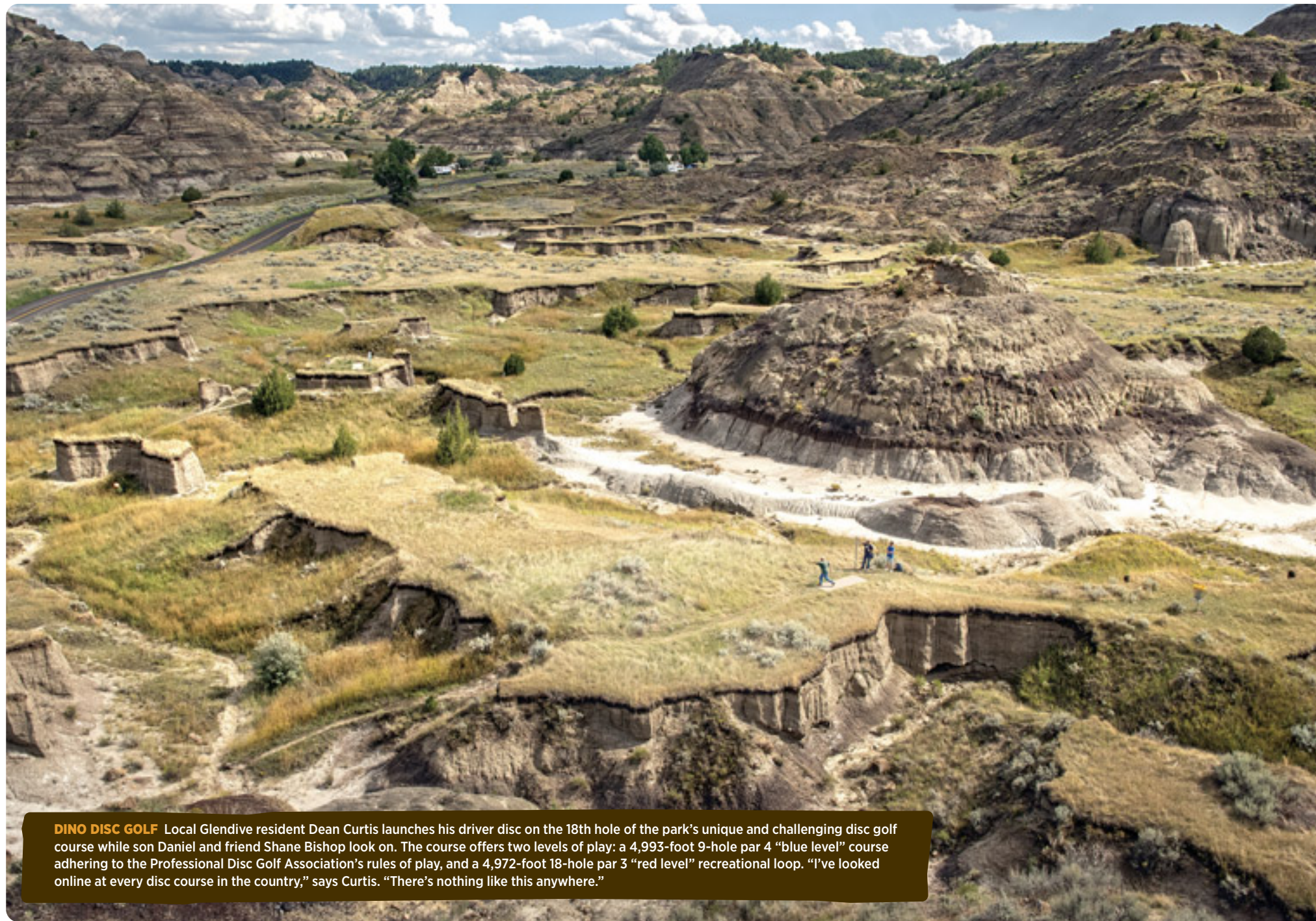
PACKED WITH OPPORTUNITIES

State park manager Chris Dantic lives at Makoshika with his wife and two sons. “It’s a great place for the boys to grow up,” he says. Not only do they get to live in an 11,000-plus-acre outdoor classroom, the Dantic boys can hike the park’s 11 established trails, play disc golf on the nine-hole professional course, participate in park events such as campfire programs and the June Buzzard Day Festival, and attend plays by Montana Shakespeare in the Park and movies and other performances at the amphitheater.

Visitors also use the park’s 1,800-square-foot picnic shelter, 3-D archery range, and nine miles of paved, lightly trafficked roads perfect for cycling.

According to Dantic, the park is home to mule deer, pronghorn (antelope), and 140 bird species including golden eagles and turkey vultures. The wildlife live among

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DINO DISC GOLF Local Glendive resident Dean Curtis launches his driver disc on the 18th hole of the park’s unique and challenging disc golf course while son Daniel and friend Shane Bishop look on. The course offers two levels of play: a 4,993-foot 9-hole par 4 “blue level” course adhering to the Professional Disc Golf Association’s rules of play, and a 4,972-foot 18-hole par 3 “red level” recreational loop. “I’ve looked online at every disc course in the country,” says Curtis. “There’s nothing like this anywhere.”

The park is a huge economic driver for this region, and with investment from the state, the sky’s the limit for what Makoshika could be as a tourist destination.



JASON STUART, DAWSON COUNTY ECONOMIC DEVELOPMENT DIRECTOR



CHRIS DANTIC, PARK MANAGER, MAKOSHIKA STATE PARK

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sagebrush, Rocky Mountain juniper, stunted ponderosa pine, and other native vegetation. In June, the rugged landscape is dotted with colorful prairie wildflowers. In winter, snow on the bluffs and mesas highlights the undulating badlands topography.

Makoshika is considered one of North America’s premier badlands, with more distinct rock formations than almost anywhere else on the continent. One origin theory is that an ancient prairie wildfire burned so hot it exposed sand and clay soils to the erosive effects of water. Eons of erosion exposed the Hell Creek sedimentary layer, which holds most of the dinosaur bones, and the Fort Union Formation, which contains ancient fish and mammal fossils.

Visitors may not dig for, touch, or remove any fossils in the park. But reporting finds is encouraged. “If someone stumbles across something especially significant, we bring in experts from the Museum of the Rockies,” Dantic says.

Dantic also manages three other Montana state parks: Pirogue Island (80 miles southwest), Medicine Rocks (100 miles south), and Brush Lake (140 miles north). Like FWP’s game wardens and wildlife biologists in expansive eastern Montana, the park manager logs a lot of highway time. Dantic says his job requires “wearing 14 different hats”— from improving roads and maintaining campgrounds to providing visitors with information and planning for the parks’ future.

Dantic is especially proud of Makoshika’s paleo lab, which he helped revive. “It was always here, but not functional,” he says. Dantic worked with the Museum of the Rockies to organize and catalogue the collection of more than 1,000 fossils found within the park that had been gathering dust in storage for years. He also hired a paleo lab manager and provides internships to college students studying paleontology. “When people get to Makoshika, they always say, ‘I didn’t know you had all this!’” he says.

It’s not just the state park’s paleo lab that causes visitors’ jaws to drop. Who knew you could play disc golf among dinosaur fossils? Who ever imagines watching movies outdoors surrounded by badlands rock formations? “Makoshika is a destination, not just a stopover. You come here to do things,” Dantic says.



NO SWIMMING TODAY Top left: Park ranger Brenlee Shipps talks to visitors about the mosasaur, an aquatic dinosaur that 66 million years ago swam in a vast sea covering much of the region. Top right: Donations from the Montana History Foundation and Friends of Makoshika have allowed the park to organize, label, and store its fossil collection in a museum-grade drawer system. Below: Teenagers from a youth group in nearby Sidney pose on the park's natural rock bridge. Groups of young people from throughout the region visit the park to take part in dinosaur and paleo education programs and hike the park's 11 established trails, like the scenic Cap Rock Trail.



BETTER ROADS A \$1.85 million road project completed in 2019 improved vehicle access for the nearly 100,000 people who visit Makoshika each year. Local economic developers hope to convince state lawmakers to allow nearby Glendive and surrounding communities to enact a resort tax that would help them mitigate the effects on local roads and other infrastructure from that annual influx of visitors.

WEAR AND TEAR

That's a mixed blessing for the city of Glendive and surrounding counties. Makoshika's nearly 100,000 annual visitors stay at local hotels and campgrounds, shop in grocery stores and at other retailers, and eat in restaurants. Jason Stuart, executive director of the Dawson County Economic Development Council, says Glendive is one of only a handful of Montana cities with enough motel stays (and resulting revenue from the state's accommodation "bed tax," used for tourism promotion) to qualify for a local Tourism Business Improvement District and a Convention and Visitors Bureau. "The park is a huge economic driver for the city and the entire region," he says.

Yet those tourists also strain the city's infrastructure. "The only way to reach Makoshika is through downtown Glendive, which means lots of big RVs and fifth-wheel campers rumbling down our main street, down two residential avenues, and then down another residential city street before

they get there," Stuart says.

Unfortunately, Glendive has no way to collect money from those tourists to mitigate the effects of road wear and tear.

Stuart would like to see Montana's tax law reformed to let tourist-heavy cities like Glendive enact a resort tax. He'd also like Montana to inject more funding into Makoshika and the entire state park system. "With investment from the state, the sky's the limit for what Makoshika could be as a visitor destination," Stuart says. "And if a resort tax or local option tax could be implemented, the city could use those revenues to better maintain and improve streets, water, sewer, sidewalks, and new and improved city trails, as well as local first responders and emergency services. It would no doubt be a great boon to the city's thinly stretched budget."

NEVER TOO OLD

At the end of the paleo tour, with Max satisfied and talked out, Shipps tells me how

she ended up at Makoshika. The 23-year-old graduated with a degree in earth science and minors in paleontology and English. She plans to start a master's program in paleontology at Idaho State University, but first she's taking time off to encourage kids to learn about dinosaurs. "But dinosaurs aren't just for kids," she adds. "You never have to grow out of dinosaurs."

I agree. Dinosaurs were the most remarkable creatures that ever lived on this planet. Some were ferocious, others bizarrely shaped, others so big they make elephants seem puny. Many exhibited behaviors and adaptations that scientists are still trying to puzzle out. And then, in a geologic blink of an eye, they disappeared, leaving behind only their feathered brethren, the birds.

What's not to marvel about dinosaurs, no matter your age? And at Makoshika, it doesn't take much imagination. There's evidence of their fascinating multimillion-year history everywhere you look. 🦖